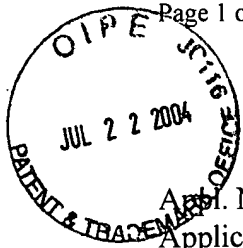


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Appl. No. 10/790,455

Page 1 of 2



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 10/790,455
Applicant : Harvey et al
Filed : March 1, 2004
Title : Integrase Mediated Avian Transgenesis

TC/A.U. : 1642
Examiner : Not yet assigned

Docket No. : AVI-025

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INFORMATION DISCLOSURE STATEMENT FILED
UNDER THE PROVISIONS OF 37 CFR 1.97(b)(3)

Sir:

In connection with the above-identified application, Applicants submit herewith an information disclosure under 37 C.F.R. 1.97(b)(3) and copies of references cited therein.

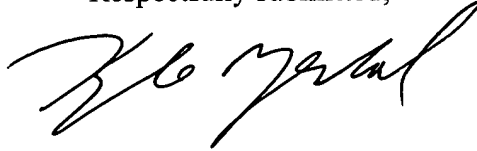
It is respectfully requested that the cited references be expressly considered during the prosecution of the above referenced application, and the references be made of record and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR 1.97(g) and (h), no representation is being made that a search has been conducted or that this statement encompasses all of the relevant information, and no inference should be made that the information and references cited are, or are considered to be, material to patentability because they are in this statement. No inference should be made that the information

and references cited are prior art merely because they are in this statement.

Applicant believes that no Office action on the merits has been mailed in the subject case and that therefore no fee is due in regard to the present submission. However, if a fee(s) is required to obtain entry of this submission, applicant authorizes the charging of such required fee(s) to deposit account number 501729.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Kyle Yesland', written in a cursive style.

Kyle Yesland, 706-227-1170, Ext. 233
Attorney for Applicants
Reg. No. 45,526
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PTO/SB/21 (02-04)

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FORM**

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| TRANSMITTAL FORM (to be used for all correspondence after initial filing) | Application Number | 10/790,455 | |
| | Filing Date | March 1, 2004 | |
| | First Named Inventor | Alex J. Harvey | |
| | Art Unit | 1642 | |
| | Examiner Name | to be assigned | |
| Total Number of Pages in This Submission | 6 | Attorney Docket Number | AVI-025 |

ENCLOSURES (Check all that apply)

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| <input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/ Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53 | <input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ | <input type="checkbox"/> After Allowance communication to Technology Center (TC) <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please Identify below): Return postcard |
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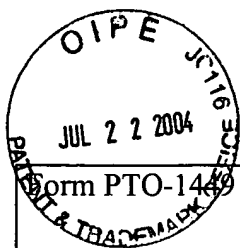
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| INFORMATION DISCLOSURE CITATION <i>(Use several sheets if necessary)</i> | Attorney Docket No. AVI-025 | Serial No. 10/790,455 |
| | Applicant HARVEY et al | |
| | Filing Date March 1, 2004 | Group 1642 |

U.S. PATENT DOCUMENTS

| Examiner Initials | Item | Document Number | Issue Date | Name | Class | Subclass | Publication Date |
|-------------------|------|-----------------|------------|---------------|-------|----------|------------------|
| | | 5,672,485 | 09/1997 | Foster et al | 435 | 40.51 | |
| | | 6,397,777 | 06/2002 | Andacht et al | 119 | 6.8 | |
| | | 2002/0094516 | | Calos et al | 435 | 4 | 07/2002 |
| | | 2003/0050258 | | Calos | 514 | 44 | 03/2003 |
| | | 6,632,672 | 10/2003 | Calos | 347 | 54 | |
| | | 2002/0116732 | | Christmann | 800 | 19 | 08/2002 |
| | | 2002/0108132 | | Rapp et al | 800 | 6 | 08/2002 |
| | | 2003/0126629 | | Rapp et al | 800 | 19 | 07/2003 |

FOREIGN PATENT DOCUMENTS

| Examiner Initials | Item | Document Number | Publication Date | Country | Class | Subclass | Translation | |
|-------------------|------|-----------------|------------------|-------------------|-------|----------|-------------|----|
| | | | | | | | Yes | No |
| | | EP-A-43075 | 01/1982 | Europe | | | | |
| | | 1047381 | 02/1989 | Japan | | | | |
| | | WO 91/06309 | 05/1991 | PCT Bringham | | | | |
| | | WO 99/19472 | 04/1999 | PCT Ivarie, et al | | | | |
| | | WO 00/11151 | 03/2000 | PCT Ivarie, et al | | | | |
| | | WO 00/56932 | 09/2000 | PCT Harvey, et al | | | | |
| | | WO 02/38613 A2 | 05/2002 | PCT Kühn, et al | | | | |
| | | WO 01/07572 A2 | 02/2001 | PCT Ow, et al | | | | |
| | | WO 01/49832 A2 | 07/2001 | PCT Schwenk | | | | |

OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, etc.)*

| | |
|--|---|
| | <i>MOSCOVICI et al</i> , Continuous tissue culture cell lines derived from chemically induced tumors of Japanese quail, <i>Cell</i> , 11:95-103 (1997) |
| | <i>STERNBERG et al</i> , Bacteriophage P1 site-specific recombination. I. Recombination between <i>loxP</i> sites, <i>J Mol Biol.</i> , 150:467-86 (1981) |

| | |
|--|--|
| | <i>BROACH et al</i> , Recombination within the yeast plasmid 2 μ circle is site-specific, <i>Cell.</i> , 29:227-34 (1982) |
| | <i>MUSCARELLA et al</i> , The Ribosomal RNA Gene Cluster in Aneuploid Chickens: Evidence for Increased Gene Dosage and Regulation of Gene Expression, <i>J. of Cell Biology</i> , 101:1749-56 (1985) |
| | <i>MATSUZAKI et al</i> , Chromosome Engineering in <i>Saccharomyces cerevisiae</i> by Using a Site-Specific Recombination System of a Yeast Plasmid, <i>Journal of Bacteriology</i> , 172:610-18 (1990) |
| | <i>BUERSTEDDE et al</i> , Increased Ratio of Targeted to Random Integration after Transfection of Chicken B Cell Lines, <i>Cell.</i> , 67:179-88 (1991) |
| | <i>THORNE et al</i> , Cytological evidence of maternal meiotic errors in a line of chickens with a high incidence of triploidy, <i>Cytogenet Cell Genet.</i> , 57:206-10 (1991) |
| | <i>MIZUNO et al</i> , Basic research for interferon gene therapy against malignant glioma, <i>NO Shinkei Geka</i> , 20:547-51 (1992) |
| | <i>ETCHES et al</i> , Chimeric chickens and their use in manipulation of the chicken genome, <i>Poult. Sci.</i> , 72:882-9 (1993) |
| | <i>NAITO et al</i> , Production of germline chimeric chickens, with high transmission rate of donor-derived gametes, produced by transfer of primordial germ cells, <i>Mol. Reprod. Dev.</i> , 39:153-61 (1994) |
| | <i>KILLARY et al</i> , Microcell Fusion, <i>Methods Enzymol.</i> , 254:133-52 (1995) |
| | <i>MILLER et al</i> , Assignment of <i>Rfp-Y</i> to the chicken major histocompatibility complex/ <i>NOR</i> microchromosome and evidence for high-frequency recombination associated with the nucleolar organizer region, <i>PNAC</i> , 93:3958-62 (1996) |
| | <i>ROBINETT et al</i> , In Vivo Localization of DNA Sequences and Visualization of Large-Scale Chromatin Organization Using Lac Operator/Repressor Recognition, <i>Journal of Cell Biology</i> , 135:1685-1700 (1996) |
| | <i>THORNE et al</i> , Genetic Analysis of Triploidy in a Selected Line of Chickens, <i>Journal of Heredity</i> , 88:495-8 (1997) |
| | <i>KUROIWA et al</i> , Efficient modification of a human chromosome by telomere-directed truncation in high homologous recombination-proficient chicken DT40 cells, <i>Nucleic Acids Res.</i> , 26:3447-48 (1998) |
| | <i>THORPE et al</i> , In vitro site-specific integration of bacteriophage DNA catalyzed by a recombinase of the resolvase/invertase family, <i>PNAS</i> , 95:5505-10 (1998) |
| | <i>BELMONT et al</i> , In vivo visualization of chromosomes using <i>lac</i> operator-repressor binding, <i>Cell Biology</i> , 8:121-124 (1998) |
| | <i>DEJONG et al</i> , Mammalian Artificial Chromosome Pilot Production Facility: Large-Scale Isolation of Functional Satellite DNA-Based Artificial Chromosomes, <i>Cytometry</i> , 35:129-33 (1999) |
| | <i>GRIFFIN et al</i> , Micro- and macrochromosome paints generated by flow cytometry and microdissection: tools for mapping the chicken genome, <i>Cytogenet Cell Genet.</i> , 87:278-81 (1999) |
| | <i>TOMIZUKA et al</i> , Double trans-chromosomal mice: Maintenance of two individual human chromosome fragments containing Ig heavy and κ loci and expression of fully human antibodies, <i>PNAS</i> , 97:722-27 (2000) |

| | | |
|--|--|---|
| | | CO <i>et al</i> , Generation of transgenic mice and germline transmission of a mammalian artificial chromosome introduced into embryos by pronuclear microinjection, <i>Chromo. Res.</i> , 8:183-91 (2000) |
| | | DE JONG <i>et al</i> , Efficient <i>in-vitro</i> transfer of a 60-Mb mammalian artificial chromosome into murine and hamster cells using cationic lipids and dendrimers, <i>Chromosome Res.</i> , 9:475-85 (2001) |
| | | KIM <i>et al</i> , Increased Mitochondrial-Encoded Gene Transcription in Immortal DF-1 Cells, <i>Exp Cell Res.</i> , 265:339-47 (2001) |
| | | GROTH <i>et al</i> , A phage integrase directs efficient site-specific integration in human cells, <i>PNAS</i> , 97:5995-6000 (2000) |
| | | THYAGARAJAN <i>et al</i> , Site-Specific Genomic Integration in Mammalian Cells Mediated by Phage Φ C31 Integrase, <i>Molecular and Cellular Biology</i> , 21:3926-34 (2001) |
| | | OLIVARES <i>et al</i> , Phage R4 integrase mediates site-specific integration in human cells, <i>Gene.</i> , 278:167-76 (2001) |
| | | SMITH <i>et al</i> , Diversity in the serine recombinases, <i>Molecular Microbiology</i> , 44:299-307 (2002) |
| | | SPEKSNIJDER <i>et al</i> , Germline Chimeric Chickens From FACS-Sorted Donor Cells, <i>Mol. Reprod. Dev.</i> , 52:33-42 (1999) |
| | | STOLL <i>et al</i> , Phage TP901-1 Site-Specific Integrase Functions in Human Cells, <i>Journal of Bacteriology</i> , 184:3657-63 (2002) |
| | | KUROIWA <i>et al</i> , Cloned transchromosomal calves producing human immunoglobulin, <i>Nat Biotechnol</i> , 20:889-94 (2002) |
| | | ORTIZ-URDA <i>et al</i> , Stable nonviral genetic correction of inherited human skin disease, <i>Nat Med.</i> , 8:1166-70 (2002) |
| | | OLIVARES <i>et al</i> , Site-specific genomic integration produces therapeutic Factor IX levels in mice, <i>Nature Biotechnology</i> , 20:1124-28 (2002) |
| | | KOLOT <i>et al</i> , Site-Specific Recombination in Human Cells Catalyzed by the Wild-Type Integrase Protein of Coliphage HK022, <i>Biotechnol Bioeng.</i> , 84:56-60 (2003) |
| | | SHERMAN <i>et al</i> , Transposition of the <i>Drosophila</i> element <i>mariner</i> into the chicken germ line, <i>Nat Biotech</i> 16:1050-1053 (1998) |
| | | HOLLIS, <i>et al</i> , Phage integrases for the construction and manipulation of transgenic mammals, <i>Reprod Biology and Endoc.</i> , 1:1-11 (2003) |
| | | GROTH, <i>et al</i> , Construction of Transgenic <i>Drosophila</i> by Using the Site-Specific Integrase From Phage Φ C31, <i>Genetics</i> 166:1775-1782 (April 2004) |
| | | ANDREAS, <i>et al</i> , Enhanced efficiency through nuclear localization signal fusion on phage Φ C31-integrase: activity comparison with Cre and FLPe recombinase in mammalian cells, <i>Nucl. Acids Res.</i> 30: No.11, 2299-2306 (2002) |
| | | BELTEKI, <i>et al</i> , Site-specific cassette exchange and germline transmission with mouse ES cells expressing Φ C31 integrase, <i>Nat. Biotechn.</i> 21:321-324 (2003) |